

## **TECHNICAL ADVISORY GROUP ISSUE SUMMARY MASS CAP PROVISION**

### ***Background***

The proposed rules place a not to exceed mass cap on any individual facility that emitted 10 pounds or more annually during the baseline years and which are not considered a “major utility”. The mass cap is set at the emissions level for the baseline years of 1998, 1999, and 2000. An analysis of emissions indicated that the potentially affected sources are industrial and small utility coal fired boilers, two waste incinerators, a coal fire lime kiln, several salvage processes, a wastewater treatment plant and a chlor-alkali plant. Refer to the attached table for emissions estimates by source category. The mass cap on facilities provides a mechanism for limiting the growth in emissions and provides the basis for trading and generating emission credits.

### ***Key Points***

- Based on current emissions estimates there are 15 to 21 facilities that are above the 10 pound threshold and which emit approximately 1,500 to 1,750 pounds annual of mercury. A balance of 82 facilities below the 10-pound threshold is estimated to emit 91 to 125 pounds annually.
- The chlor-alkali plant at 1,085 pounds per year accounts for approximately 60% of Mass Cap source emissions. This facility is currently operating at a level that is anticipated to be equal to a forthcoming MACT regulation for this process. The two waste incinerator units emit 214 pounds (16%) per year and meet an applicable MACT standard by activated carbon injection. The remaining sources, other than coal fired boilers, account for 128 pounds (8%) with no current or anticipated controls other than NR 446. The coal boilers are addressed below.
- Originally, the 15 coal-fire boilers (industrial and small utility) were estimated to emit approximately 527 pounds per year. This has been revised to an estimated 7 to 13 boilers emitting between 105 to 326 pounds per year or 7 to 19% of the mass cap source emissions. The low end is based on an assessed reduction by the existing control equipment. The high end is based on fuel mercury input and no control removal to represent a conservative estimate. The revise estimates are based on 1999 data.
- The majority of industrial coal boilers operated over a range of annual capacity utilization from 45 to 73% (one operated at 21%) based on the 1999 data. At these levels total boiler emissions are 137 (controlled) to 311 (fuel input) pounds of mercury per year. As a sensitivity analysis, the emissions were estimated at the 100% utilization level resulting in 243 (controlled) to 538 pounds per year. This would represent a maximum potential for these units.
- If the affected industrial boilers grow in utilization beyond current levels and beyond their mass cap then they would have to either implement controls or obtain emission credits. The sector noted that it is unlikely that growth will occur through the installation of additional units.
- Potential controls for industrial and small utility boilers include those discussed for the utility sector: fuel switching, activated carbon injection, fabric filter technology, etc. However, the

capability and limitations on industrial sized boilers have not been determined. For example, a stoker boiler is a type of unit commonly found in the industrial population but not in the utility sector. One additional caveat is that the industrial sector re-uses very little if any of their fly ash.

- The USEPA is currently working on an Industrial Boiler MACT standard addressing mercury to be proposed in the summer of 2003 with implementation targeted for 2006. The agency has indicated that the standard will likely be based on fabric filter technology (without AC injection) by fuel type. This would mean that on the low side 5 of the 7 boilers (those with an ESP or other PM control) would have to pursue additional control equivalent to a fabric filter. However, this is subject to EPA reviewing public comments and any pursuant litigation. If EPA does not implement a MACT standard in a timely fashion, the “Hammer” is anticipated to require implemented control by the 2011 – 2012.
- If the Industrial facilities do not grow in capacity utilization then there will be no cost for compliance other than for monitoring and reporting. If they do grow they will have the cost of implementing controls or obtaining offsets.
- The current baseline determination brings facilities under the Mass Cap requirement once they have surpassed the 10-pound threshold. Their cap is then established at the operating level. The issue has been raised that it is not equitable to allow sources to grow and then establish a mass cap.
- The mass cap facilities are a potential source of emission credits. The Chlor-alkali facility is undergoing modifications in operation to reduce mercury emissions. This is expected to potentially yield significant emission reductions, but the ultimate result has not yet been quantified. The industrial coal fired boilers are also a potential source. But these are subject to the existing level of control and potential MACT requirements. All emission credits must be excess of other federal or state requirements.